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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,130	04/16/2004	Ken Whatmough	42783-0051	7995

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EXAMINER	
CHU, DAVID H	
ART UNIT	**PAPER NUMBER**
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,130	WHATMOUGH, KEN	
	Examiner	Art Unit	
	David H. Chu	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11,14,16,17 and 19-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11,14,16,17 and 19-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 recites the limitation "the converting of first graphic object data" in line 1-2 of claim 3.

- There is insufficient antecedent basis for this limitation in the claim

[*The "conversion" cited in claim 3 does not clearly specify which conversion it is referring to in claim 1*]

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 4-5, 11, 14-15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Probets (Document Engineering Lab, http://www.eprg.org/research/SVG/flash2svg/ & http://www.eprg.org/research/SVG/flash2svg/swfformat.php) in view of Isaacs (U.S. Patent No. 5,894,308), in view of W3C (W3C, http://www.w3.org/TR/SVGMobile/), and further in view of Noyle (U.S. Patent No. 6,874,150).

5. Note with respect to claim 1,

6. Probets teaches:

- Converting the graphic object data defining the vector graphics object from an edge record based format to a path format, the edge record based format including a plurality of edge records each defining an edge of the graphic object, the edge records including information associating the defined edges with fill styles that the edges border against

  [*Probets teaches the creation of SVG paths and groups from the shape and vector information contained in the SWF file (Document Engineering Lab, Flash and SVG: "File*

Conversion"). The shapes of the SWF file are defined by a series of moveto, lineto and curveto operations with associated fill and stroke colors and patterns.

Further, Probets includes a sample code that is the equivalent to the ***edge record format*** *disclosed by the applicant (Document Engineering Lab, Semantics of Macromedia's Flash (SWF) Format and its Relationship to SVG: "Tags, Shapes and Frames")*]

- The path format including path elements that are each associated with a fill style and define one or more polygon shapes at least partially filled with the associated fill style, the path elements collectively defining the graphic object

[*As discussed above Probets teaches the path format being a SVG format file.*]

7. However, Probets does not expressly teach:

- Converting the graphic object data from the path format to a second format

  The conversion including:

  - Redefining the polygon shapes defined by the path elements as groups of triangles
  - Combining at least some triangles in the groups of triangles into further polygon shapes that fall within complexity thresholds

8. Isaacs teaches:

- Converting the graphic object data from the path format to a second format

  The conversion including:

  - Redefining the polygon shapes defined by the path elements as groups of triangles

[*Converting the 3D model into polygons of different shape (not only triangles)*]

(Isaacs, col. 1, line 20-24)

- Combining at least some triangles in the groups of triangles into further polygon shapes that fall within complexity thresholds

[*The method of reducing the number of polygons in a 3D object (col. 7, line 13-27), wherein the 3D object is converted in triangle form (col. 5, line 57-67).*
Further, one of the methods taught by Isaacs teaches reducing the number of polygons according to the length of edges of the triangles, wherein the length of a triangle serve as a threshold (col. 8, line 22-36) (col. 6, line 53-65). As shown in FIGS. 8a - 8b, it is clear that the smaller triangles on the left of FIG. 8a are combined and redefined as the corresponding bigger triangles of FIG 8b.
Note further, Isaacs teaches, in admitted art that a more realistic rendering of the 3D object by filling in the polygons with various colors (col. 1, line 20-25)]

9. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the simplifying an polygon model by combining triangles teaching of Isaacs to the converted SVG path format, ***because this will allows optimizing the number of polygons of a model without resulting in unpredictable degradation in image quality***.

(Isaacs, col. 2, line 7-11)

10. Note further, the combined teachings of Probets and Isaacs does not expressly teach:

- The complexity threshold being based on predetermined capabilities of a wireless device

- Transmitting the converted vector graphics object in the second format to the wireless device over the wireless communication network for display thereon

11. W3C teaches:

- Transmitting the converted vector graphics object in the second format to the wireless device over the wireless communication network for display thereon

[*SVG Tiny and Basic that are specifically used in mobile phones and PDA (W3C, "Mobile SVG Profiles: SVG Tine and SVG Basic")*

Further, It is well known in the art to send data over a wireless communication link to a mobile phone and a PDA. Cell phones and PDA devices are frequently used to receive data. Therefore, it would have been obvious to transmit data of Isaacs to a wireless device over a wireless network.]

12. Therefore, it would have been obvious to one of an ordinary skill in the art to apply SVG Profiles teachings that are specific for mobile phone and PDA, and send data over a wireless communications link to the combined teachings of Probets and Isaacs, because ***this will allows the user receiving/sending data to their PDA or mobile phone and allows this allows sending and receiving information to any device without being constrained to location and time***.

13. Probets teaches:

- The complexity threshold being based on user input

14. Further, Noyle teaches:

- The complexity threshold being based on predetermined capabilities of a wireless device

  [*Noyle teaches the method and system are provided for controlling the algorithmic elements in 3D graphics system, and the advantages of processing a triangle because of its efficiency. Therefore, the teachings of Noyle suggest the limitations [complexity threshold] of a processor, processing images on a screen by only using triangle polygons, by teaching the advantages of processing a triangle. A processor have direct affect/relation to the capability of the viewing device*]

  (Noyle, col. 16, line 26-52)

15. Further it is well known in the art that the user or the system of Isaacs will not generate 3D models that are not capable of viewing on the computer system on which it is being created.

16. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the triangle processing teachings of Noyle to the combined teachings of Probets, Isaacs and W3C, because ***this will allow efficient rendering of images on a display device without exceeding the capabilities of said device***.

17. Note with respect to claim 3,

18. Probets teaches:

For the process of converting an SWF file to SVG, the steps of identifying each vertex, edges and the fill style associated herewith (Document Engineering Lab, "Semantics of Macromedia's Flash (SWF) Format and its Relationship t SVG", Section: "Tags, Shapes and Frames").

19. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the SWF-to-SVG conversion teachings to the 3D object-to-Triangle form teachings of Isaacs, because this will allow the conversion of 2D objects for added range of sources files for polygon reduction.

20. Note with respect to claims 4 and 5,

21. Probets teaches a **SVG format** and a **flash file format** as discussed above with respect to claim rejection 3.

22. Note with respect to claim 6, claim 6 is similar in scope to the claim 1, thus the rejections to claim 1 hereinabove are also applicable to claim 6.

[The reduced polygon shape as taught by Isaacs above comprise of edges that define said polygon shape]

23. Note with respect to claim 7,

Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

24. Further, the triangles and triangles after polygon reduction of Isaacs inherently have **continuous interior fill style region without internal island contours**.

25. However, Isaacs does note expressly teach:

- The further polygons each have a continuous interior fill style region without internal island contours according to **complexity threshold**

26. As discussed above Noyle teaches the complexity threshold of a viewing device.

27. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the triangle processing teachings of Noyle to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

28. Note with respect to claim 8,

29. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons

(Isaacs, col. 7, line 9-20)

30. Further, the triangles and triangles after polygon reduction of Isaacs inherently only have **convex vertices**.

31. However, Isaacs does note expressly teach:

- The further polygons each have only convex vertices according to **complexity threshold**

32. As discussed above Noyle teaches the complexity threshold of a viewing device.

33. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the triangle processing teachings of Noyle to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

34. Note with respect to claim 9,

35. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons

(Isaacs, col. 7, line 9-20)

36. Further, the triangles and triangles after polygon reduction of Isaacs inherently have **under a predetermined number of sides**, as the polygons are always in triangle form.

37. However, Isaacs does note expressly teach:

- The further polygons each have under a predetermined number of sides according to **complexity threshold**

38. As discussed above Noyle teaches the complexity threshold of a viewing device.

39. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the triangle processing teachings of Noyle to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

40. Note with respect to claim 10,

41. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

42. Further, each of the triangles and triangles after polygon reduction of Isaacs inherently are **simple polygons**.

43. However, Isaacs does note expressly teach:

- Each of the further polygons being simple polygons according to **complexity threshold**

44. As discussed above Noyle teaches the complexity threshold of a viewing device.

45. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the triangle processing teachings of Noyle to the 3D object-to-Triangle form teachings of Isaacs, because this ***allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

46. Note with respect to claim 16, refer to claim rejections 1 and 7-10 discussed above.

47. Note with respect to claim 11, claim 11 is similar in scope to the claims 1 and 3, thus the rejections to claims 1 and 3 hereinabove are also applicable to claim 11.

48. Note with respect to claim 14, refer to claim rejection 1 discussed above.

49. Further Isaacs teaches:

- A computer system (FIG. 1), wherein the Polygon Reduction Editor is a component of the system

50. Note with respect to claim 17, refer to claim rejection 1 discussed above.

[*Further, Isaacs teaches a Polygon Reduction Editor*]

51. Note with respect to claims 19-22, claims 19-22 are similar in scope to the claims 1, 4 and 5, thus the rejections to claims 1, 4 and 5 hereinabove are also applicable to claims 19-22.

Response to Arguments

52. Applicant's arguments with respect to claims 1, 11, 14 and 17 have been considered but are moot in view of the new ground(s) of rejection. The newly added claims 19-22 required the Examiner to change the grounds of rejection for claims 1, 11, 14 and 17. Following are the applicant's arguments and examiner's response.

53. The applicant argues:

54. Non-analogous prior art

- Isaacs and Williams are not concerned with vector graphics or the delivery of Web-based vector graphics to wireless communication devices.

  [*Anything that is defined by edges/polygons is a vector graphic. Therefore, as shown in FIG.4A of Isaacs, the 3D model defined by polygonal shapes and edges is a form of vector graphics.*

  Further, it is well known in the art to transmit data (such as the simplified polygon model of Isaacs) to a wireless device such as cell phones and PDA devices. Cell phones and PDA devices are frequently used to receive data. Therefore, it would have been obvious to transmit data of Isaacs to a wireless device over a wireless network.]

- The problems addressed by Isaacs, Williams and Noyle are different from one another, and unrelated to efficient delivery of graphics to wireless devices over a wireless network

  [*As, discussed above, the Examiner stated how it is well known in the art to send data over a wireless network to wireless devices such as cell phones, PDA devices and Laptop computers.*

  Further, Isaacs is concerned with creating a model consisting of an optimized number of

polygons without significantly sacrificing image quality.

The Examiner is no longer using the Williams reference.

And Noyle, teaches the use of triangles for efficient processing and how the processor limits the processing capability.

Therefore, Isaacs and Noyle are both concerned of efficient processing of an image.]

55. Failure to teach or suggest each and every limitation

- The resultant image of Williams which is output and capable of display is a raster graphics image, which is defined by pixels

  [*Argument moot in view of new grounds of rejection*]

- The polygon reduction of Isaacs is not based on the complexity thresholds based on predetermined capabilities of a wireless device. Isaacs teaches reducing the number of polygons based on user input

  [*As discussed above, the complexity threshold can be the processing capability of the processor. It is well known in the art that the user or the system of Isaacs will not generate 3D models that are not capable of viewing on the computer system on which it is being created*]

- Noyle does not teach using complexity thresholds based on predetermined capabilities of a wireless device

  [*refer to above*]

- The Probets reference describes a method of converting SWF images to SVG images, but does not describe reducing the SVG images as claimed, nor the reduction being based on complexity thresholds based on predetermined capabilities of a wireless device

[*As discussed above with respect to claim 1, the Examiner used the Probets reference for converting a edge record format (SWF) to a path record format (SVG). The Isaacs reference was used for simplifying the converted path record format to a second format according to the simplification rules of Isaacs. Further, W3C teaches that SVG can specifically be used in mobile phones and PDA's. Again, the reduction is based on the predetermined capabilities of the processor of a wireless device, as taught by Noyle and discussed above*]

Conclusion

56. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Chu whose telephone number is (571) 272-8079. The examiner can normally be reached on M-TH 9:00am - 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark k. Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DHC

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